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EXAMINER	
LAY, MICHELLE K	
ART UNIT	**PAPER NUMBER**
2628	
NOTIFICATION DATE	**DELIVERY MODE**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/511,539	NAKANISHI, MASAHIRO	
	Examiner	Art Unit	
	MICHELLE K. LAY	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 11 May 2009.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed 05/11/2009 has been entered and made of record. Claims 1-17 are pending.

The amendment to claims 11-15 has overcome the 101 rejection made in the non-final office action filed 02/13/2009.

Response to Arguments

Applicant's arguments filed 05/11/2009 with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims **1-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonough et al. (6,163,749) in view of Millington (6,178,380)

McDonough teaches the limitations of claims 1-17 with the exception of explicitly teaching the calculated complexity exceeding an upper limit. However, Millington teaches a navigation system that zooms in and out based on display complexity.

In regards to claim **1**, McDonough teaches a method/system for implementing smooth scrolling in a map display tool. The map display tool may use data at different levels of detail [c.5 L.54-55]. Referring to Fig. 15, McDonough teaches inserting name data associated with the data item or the point of interest within the map display (said ***object***) [c.15 L.16-20]. A ***priority*** list (76) contains a list of feature types (names of roadways of a certain rank, airports, rivers, parks, and etc.). The map processing layer processes the name and icon information in the order designated by the priority list [c.17 L.1-5]. As prioritization takes place, the map processing layer performs a conflicts check (said ***complexity calculating***) to determine whether names and icons will overlap or interfere (said ***complexity***) with one another on the rendered map. The conflicts check preferably consists of taking each name item in an order of priority and determining if the name will overlap the area of a name already selected ***based on priority*** [c.17 L.12-15, 19-20]. Although McDonough fails to explicitly teach calculating complexity, the conflict check of McDonough determines overlapping objects, where if objects did overlap, would cause a more dense and confusing display, i.e., more complex. If the extents of the newest name would conflict with the area required by a name already in the list, the newest name is omitted from the list, and thus omitted from the map (said ***suppressing display of at least one of the objects based on complexity, priorities***) [c.17 L.30-33]. McDonough further teaches layer switching distances (94), which are the points at which the map display tool adds or deletes information (said ***suppress***) from the display corresponding to the new higher or lower information layer in the map database. The layer switching distances may be tied to the width of the geographic

area shown in the map rectangle on the display. For example, if the layer switching distance between layers 3 and 4 is 35 miles (said ***limit***), and the width of the map region shown in the map rectangle changes from 40 miles to 30 miles, the information layer displayed will switch from layer 4 (major roads and lakes) to layer 3 (layer 4 data in addition to smaller roads and other features) [c.10 L.1-25].

The method of McDonough is implemented in a combination of hardware and software components. With reference to Fig. 1, the system includes a process (12), a drive (14) connected to the processor (12), and non-volatile memory storage device (16) for storing a navigation software program (18) [c.3 L.31-35]. The processor of McDonough provides the ***means*** for calculating the complexity and the control means for suppressing the display.

Millington teaches a navigation system as shown in Fig. 1. As shown in Fig. 2, the display includes map (52) which is comprised of a plurality of road segments (53) and road segment name field (58), where each segment in the database has a rank associated with it and each segment is displayed in their associated rank color [c.4 L.1-22]. The scale of map (52) is below a threshold scale, thus vehicle location display (50) operates in a first mode and map (52) display associated names in the road segment name fields (58). The threshold scale is preferably set at a scale that display a map (52) that is not overly complex or detailed and represents a fully zoomed view (said ***based on calculated complexity***) [c.4 L.22-29]. Fig. 3 illustrates when the scale of map (52) is above the threshold scale, i.e., zoomed out. When the scale of map (52) exceeds the threshold scale (said ***exceeds an upper limit***), display (50) operates in a

second mode. Preferably, when the variable scale exceeds the threshold scale, map (52) no longer display the associated names in the current road segment name field (58) (said ***suppressing display***) [c.4 L.30-40].

It would have been obvious to one of ordinary skill in the art to modify the invention of McDonough with the threshold limit of Millington because one disadvantage of the current map zoom functions is that when a user zooms out it can be difficult, because of the complexity of a larger scale map, to see the current vehicle location on the large scale map [Millington: c.1 L.60-c.2 L.2]. Therefore, it would be advantageous to minimize the complexity on the screen as the scale increases, so that the user can see their current position on the map.

In regards to claim **2**, McDonough teaches smooth scrolling capability for moving items displayed on the screen [c.18 L.37-38]. As the navigation application provides instructions to scroll (said ***animation***), the map rectangle (204) shown on the display moves within the first map area (200). The smooth scrolling function tracks the movement of the map rectangle, predicts where the map rectangle will intersect the boundaries of the first map area (200) (said ***frame***), and generates a second map area (202) (said ***frame***) based on the expected intersection point of the map rectangle with the boundary of the first map area. The second map area preferably includes some redundant information so that there is at least an overlap of map areas that includes the area in the first graphics buffer displayed when the map rectangle reaches the boundary [c.18 L.54-65]. Furthermore, using the smooth scrolling, movement of the map

rectangle is based on a scroll direction and scroll speed supplied by the navigation application. The speed change is incorporated with the map rectangle movement and the number of pixels per movement is adjusted accordingly. Additionally, the scrolling functionality in the map display tool may include the option to display only a portion of the map data rendered in the first graphics buffers. For example, roads of rank 0 may be omitted while the map scrolls and rendered when movement stops. In addition to avoiding a dense clutter of information on the display, processing time and efficiency may be increased [c.19 L.65 - c.20 L.23]. Therefore, the method/system of McDonough determines the density (said ***complexity***) during animation (i.e., moving display to show up to date location of vehicle) and omits certain objects (e.g., rank 0 objects) (said ***control means***) in order to increase processing time and efficiency during animation.

In regards to claim **3**, McDonough teaches a method/system for implementing smooth scrolling in a map display tool. The map display tool may use data at different levels of detail [c.5 L.54-55]. Referring to Fig. 15, McDonough teaches inserting name data associated with the data item or the point of interest within the map display [c.15 L.16-20]. A ***priority*** list (76) contains a list of feature types (names of roadways of a certain rank, airports, rivers, parks, and etc.). The map processing layer processes the name and icon information in the order designated by the priority list [c.17 L.1-5]. As prioritization takes place, the map processing layer performs a conflicts check (said ***complexity calculating***) to determine whether names and icons will overlap or interfere (said ***complexity***) with one another on the rendered map. The conflicts check

preferably consists of taking each name item in an order of priority and determining if the name will overlap the area of a name already selected based on priority [c.17 L.12-15, 19-20]. Although McDonough fails to explicitly teach complexity, the conflict check of McDonough determines overlapping objects, where if objects did overlap, would cause a more dense and confusing display, i.e., more complex. If the extents of the newest name would conflict with the area required by a name already in the list, the newest name is omitted from the list, and thus omitted from the map [c.17 L.30-33]. McDonough further teaches layer switching distances (94) are the points at which the map display tool adds or deletes information (said ***invalidating***) from the display corresponding to the new higher or lower information layer in the map database. The layer switching distances may be tied to the width of the geographic area shown in the map rectangle on the display. For example, if the layer switching distance between layers 3 and 4 is 35 miles (said ***upper limit***), and the width of the map region shown in the map rectangle changes from 40 miles to 30 miles, the information layer displayed will switch from layer 4 (major roads and lakes) to layer 3 (layer 4 data in addition to smaller roads and other features) [c.10 L.1-25]. The method of McDonough is implemented in a combination of hardware and software components. With reference to Fig. 1, the system includes a process (12), a drive (14) connected to the processor (12), and non-volatile memory storage device (16) for storing a navigation software program (18) [c.3 L.31-35]. The processor of McDonough provides the means for calculating the complexity and the control means for invalidating part of the functions for display.

Millington teaches a navigation system as shown in Fig. 1. As shown in Fig. 2, the display includes map (52) which is comprised of a plurality of road segments (53) and road segment name field (58), where each segment in the database has a rank associated with it and each segment is displayed in their associated rank color [c.4 L.1-22]. The scale of map (52) is below a threshold scale, thus vehicle location display (50) operates in a first mode and map (52) display associated names in the road segment name fields (58). The threshold scale is preferably set at a scale that display a map (52) that is not overly complex or detailed and represents a fully zoomed view (said ***based on calculated complexity***) [c.4 L.22-29]. Fig. 3 illustrates when the scale of map (52) is above the threshold scale, i.e., zoomed out. When the scale of map (52) exceeds the threshold scale (said ***upper limit***), display (50) operates in a second mode. Preferably, when the variable scale exceeds the threshold scale, map (52) no longer display the associated names in the current road segment name field (58) (said ***invalidating***) [c.4 L.30-40].

It would have been obvious to one of ordinary skill in the art to modify the invention of McDonough with the threshold limit of Millington because one disadvantage of the current map zoom functions is that when a user zooms out it can be difficult, because of the complexity of a larger scale map, to see the current vehicle location on the large scale map [Millington: c.1 L.60-c.2 L.2]. Therefore, it would be advantageous to minimize the complexity on the screen as the scale increases, so that the user can see their current position on the map.

In regards to claim **4**, McDonough teaches smooth scrolling capability for moving items displayed on the screen [c.18 L.37-38]. As the navigation application provides instructions to scroll (said ***animation***), the map rectangle (204) shown on the display moves within the first map area (200). The smooth scrolling function tracks the movement of the map rectangle, predicts where the map rectangle will intersect the boundaries of the first map area (200) (said ***frame***), and generates a second map area (202) (said ***frame***) based on the expected intersection point of the map rectangle with the boundary of the first map area. The second map area preferably includes some redundant information so that there is at least an overlap of map areas that includes the area in the first graphics buffer displayed when the map rectangle reaches the boundary [c.18 L.54-65]. Furthermore, using the smooth scrolling, movement of the map rectangle is based on a scroll direction and scroll speed supplied by the navigation application. The speed change is incorporated with the map rectangle movement and the number of pixels per movement is adjusted accordingly. Additionally, the scrolling functionality in the map display tool may include the option to display only a portion of the map data rendered in the first graphics buffers. For example, roads of rank 0 may be omitted while the map scrolls and rendered when movement stops. In addition to avoiding a dense clutter of information on the display, processing time and efficiency may be increased [c.19 L.65 - c.20 L.23]. Therefore, the method/system of McDonough determines the density (said ***complexity***) during animation (i.e., moving display to show up to date location of vehicle) and invalidates certain objects (e.g., rank 0 objects) (said ***control means***) in order to increase processing time and efficiency during animation.

In regards to claim **5**, McDonough teaches smooth scrolling capability for moving items displayed on the screen [c.18 L.37-38]. As the navigation application provides instructions to scroll (said ***animation***), the map rectangle (204) shown on the display moves within the first map area (200). The smooth scrolling function tracks the movement of the map rectangle, predicts where the map rectangle will intersect the boundaries of the first map area (200) (said ***frame***), and generates a second map area (202) (said ***frame***) based on the expected intersection point of the map rectangle with the boundary of the first map area. The second map area preferably includes some redundant information so that there is at least an overlap of map areas that includes the area in the first graphics buffer displayed when the map rectangle reaches the boundary [c.18 L.54-65]. Furthermore, using the smooth scrolling, movement of the map rectangle is based on a scroll direction and scroll speed supplied by the navigation application. The speed change is incorporated with the map rectangle movement and the number of pixels per movement is adjusted accordingly. Additionally, the scrolling functionality in the map display tool may include the option to display only a portion of the map data rendered in the first graphics buffers. For example, roads of rank 0 may be omitted while the map scrolls and rendered when movement stops. In addition to avoiding a dense clutter of information on the display, processing time and efficiency may be increased. [c.19 L.65 - c.20 L.23]. The map processing layer performs a conflicts check (said ***complexity calculating***) to determine whether names and icons will overlap or interfere (said ***complexity***) with one another on the rendered map. The conflicts check preferably consists of taking each name item in an order of priority and

determining if the name will overlap the area of a name already selected based on priority [c.17 L.12-15, 19-20]. If the extents of the newest name would conflict with the area required by a name already in the list, the newest name is omitted from the list, and thus omitted from the map (said ***suppressing display of at least one of the objects based on complexity***) [c.17 L.30-33]. McDonough further teaches layer switching distances (94) are the points at which the map display tool adds or deletes information (said ***suppress***) from the display corresponding to the new higher or lower information layer in the map database. The layer switching distances may be tied to the width of the geographic area shown in the map rectangle on the display. For example, if the layer switching distance between layers 3 and 4 is 35 miles (said ***limit***), and the width of the map region shown in the map rectangle changes from 40 miles to 30 miles, the information layer displayed will switch from layer 4 (major roads and lakes) to layer 3 (layer 4 data in addition to smaller roads and other features) [c.10 L.1-25]. Therefore, the switching distances (94) provides the upper limit of processing capability for the system, i.e., determines the level of detail to render. Furthermore, the method/system of McDonough determines the density (said ***complexity***) during animation (i.e., moving display to show up to date location of vehicle) and omits certain objects (e.g., rank 0 objects) (said ***control means***) in order to increase processing time and efficiency during animation. The method of McDonough is implemented in a combination of hardware and software components. With reference to Fig. 1, the system includes a process (12), a drive (14) connected to the processor (12), and non-volatile memory storage device (16) for storing a navigation software program (18) [c.3 L.31-35]. The processor of

McDonough provides the means for calculating the complexity and the control means for suppressing the display.

Millington teaches a navigation system as shown in Fig. 1. As shown in Fig. 2, the display includes map (52) which is comprised of a plurality of road segments (53) and road segment name field (58), where each segment in the database has a rank associated with it and each segment is displayed in their associated rank color [c.4 L.1-22]. The scale of map (52) is below a threshold scale, thus vehicle location display (50) operates in a first mode and map (52) display associated names in the road segment name fields (58). The threshold scale is preferably set at a scale that display a map (52) that is not overly complex or detailed and represents a fully zoomed view (said ***based on calculated complexity***) [c.4 L.22-29]. Fig. 3 illustrates when the scale of map (52) is above the threshold scale, i.e., zoomed out. When the scale of map (52) exceeds the threshold scale (said ***exceeds an upper limit***), display (50) operates in a second mode. Preferably, when the variable scale exceeds the threshold scale, map (52) no longer display the associated names in the current road segment name field (58) (said ***suppressing display***) [c.4 L.30-40]. The same rationale for combining as applied to claim 4 is incorporated herein.

In regards to claim **6**, claim 6 recites similar limitations as claim 1 but in manufacture form. Therefore, the same rationale used for claim 1 is applied. McDonough further teaches the navigation system is a combination of hardware and software components

that comprises non-volatile memory storage device (16) for storing a navigation software program (18) (said ***computer readable medium***) [c.3 L.20-44].

In regards to claim **7**, claim 7 recites similar limitations as claim 2 but in manufacture form. Therefore, the same rationale used for claim 2 is applied. The manufacture means rationale made in claim 6 is incorporated herein.

In regards to claim **8**, claim 8 recites similar limitations as claim 3 but in manufacture form. Therefore, the same rationale used for claim 3 is applied. McDonough further teaches the navigation system is a combination of hardware and software components that comprises non-volatile memory storage device (16) for storing a navigation software program (18) (said ***computer readable medium***) [c.3 L.20-44].

In regards to claim **9**, claim 9 recites similar limitations as claim 4 but in manufacture form. Therefore, the same rationale used for claim 4 is applied. The manufacture means rationale made in claim 8 is incorporated herein.

In regards to claim **10**, claim 10 recites similar limitations as claim 5 but in manufacture form. Therefore, the same rationale used for claim 5 is applied. McDonough further teaches the navigation system is a combination of hardware and software components that comprises non-volatile memory storage device (16) for storing a navigation software program (18) (said ***computer readable medium***) [c.3 L.20-44].

In regards to claim **11**, claim 11 recites similar limitations as claim 1 but in method form. Therefore, the same rationale used for claim 1 is applied. Furthermore, it would have been obvious to one of ordinary skill in the art that the system of McDonough as recited in the rationale of claim 1, carries out a series of steps, i.e. a method as recited in claim 11.

In regards to claim **12**, claim 12 recites similar limitations as claim 2 but in method form. Therefore, the same rationale used for claim 2 is applied. The method rationale made in claim 11 is incorporated herein.

In regards to claim **13**, claim 13 recites similar limitations as claim 3 but in method form. Therefore, the same rationale used for claim 3 is applied. Furthermore, it would have been obvious to one of ordinary skill in the art that the system of McDonough as recited in the rationale of claim 3, carries out a series of steps, i.e. a method as recited in claim 13.

In regards to claim **14**, claim 14 recites similar limitations as claim 4 but in method form. Therefore, the same rationale used for claim 4 is applied. The method rationale made in claim 13 is incorporated herein.

In regards to claim **15**, claim 15 recites similar limitations as claim 5 but in method form. Therefore, the same rationale used for claim 5 is applied. Furthermore, it would have

been obvious to one of ordinary skill in the art that the system of McDonough as recited in the rationale of claim 5, carries out a series of steps, i.e. a method as recited in claim 15.

In regards to claim **16**, claim 16 recites similar limitations as claims 1 and 6 but in manufacture form. Therefore, the same rationale used for claims 1 and 6 is applied. McDonough further teaches the navigation system is a combination of hardware and software components that comprises non-volatile memory storage device (16) (said ***computer readable recording medium)*** for storing a navigation software program (18) (said ***display program***) [c.3 L.20-44].

In regards to claim **17**, McDonough teaches the navigation system may be implemented in a networked environment or on a client-server platform (said ***communication means with an external device***) [c.3 L.27-29].

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle K. Lay whose telephone number is (571) 272-7661. The examiner can normally be reached on Monday-Friday 7:30a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee M. Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michelle K. Lay/
Examiner, Art Unit 2628
May 21, 2009

/Kee M Tung/
Supervisory Patent Examiner, Art Unit 2628